ABSTRACT

This invention provides novel peptides that function *in vivo* as agonists of the VPAC2 receptor. These insulin secretagogue polypeptides are shown to lower blood glucose *in vivo* more than controls upon glucose challenge. The polypeptides of this invention are also stable in formulation and have long half-lives. The peptides of the present invention provide a new therapy for patients with decreased endogenous insulin secretion, in particular type 2 diabetics. In particular, the invention is a polypeptide selected from a specific group of VPAC2-related polypeptides, or functional equivalents thereof. The invention is also directed to a method of treating a metabolic disease in a mammal comprising administering a therapeutically effective amount of the insulin secretagogue peptides to said mammal. Also disclosed are methods of making the peptides, both recombinant and synthetic.